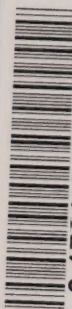


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Dept. of National Defence

HONOURABLE PAUL HELLYER

Minister of National Defence

HONOURABLE LUCIEN CARDIN

Associate Minister of National Defence

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WHITE PAPER ON DEFENCE—1964

SECTION I

Introduction

Many of the basic principles that govern Canada's defence policy are constant because they are determined by factors, such as geography and history, which are specific. Others, such as the nature and the magnitude of the threat to peace and security and the development of weapons and weapons technology, change rapidly and drastically. Therefore, defence policy must adapt itself to such changes, while principles remain constant. That is why it is desirable for the government not only to provide for defence changes when they are necessary, but to keep the public informed of the nature of and the reasons for the new policies. This can be done through White Papers on Defence, debates in the House of Commons, discussions in Parliamentary Defence Committees, and in many other ways.

It is hoped that this White Paper on Defence will be helpful for this purpose.

Objectives

The objectives of Canadian defence policy, which cannot be dissociated from foreign policy, are to preserve the peace by supporting collective defence measures to deter military aggression; to support Canadian foreign policy including that arising out of our participation in international organizations, and to provide for the protection and surveillance of our territory, our air-space and our coastal waters.

SECTION II

POLICY SINCE 1945

Post-war Developments and Canadian Policy

Canada's foreign and defence policies have been shaped by some of the major international developments of the post-World War II period. The first in time and importance was Canada's adherence to the Charter of the United Nations, which created an obligation to support a system of international co-operation for the maintenance of peace and security.

The second was membership in the North Atlantic Treaty Organization, which joined Western Europe and North America in a common obligation for the defence of each other's territories against aggression. NATO was necessary because there was a direct threat to the security of Europe which could not be met by United Nations or national means alone. As befitted her relatively strong post-war position, Canada played a prominent part in the formation of the Alliance.

Of even greater significance was the 1951 decision of NATO to become more than a treaty of mutual assistance by developing a system of collective military forces. This was a new experiment in international co-operation.

The advent of nuclear weapons and the development of long-range systems for their delivery introduced a new range of problems in North American defence. The decision to continue in the post-war period Canada's close military association with the United States in the defence of North America, which began with the Ogdensburg Declaration of 1940, can be seen as an aspect of Canada's conviction that security lay in collective arrangements. The emerging direct threat to North America itself, in turn, led to the concept of partnership with the United States in North American air defence, a relationship which was formalized by the signing of the North American Air Defence (NORAD) Agreement in 1958.

Parallel with the pressure from the Soviet bloc a new set of tensions developed as pre-war empires were dissolved in favour of a great number of newly independent countries. The instability inevitable in this process created a need for international peace-keeping, mainly under the United Nations, to which Canada made and continues to make an important contribution.

In these circumstances, there have developed four parallel methods by which the objectives of Canadian defence policy have been pursued. They are:

- (a) *Collective Measures* for maintenance of peace and security as embodied in the Charter of the United Nations, including the search for balanced and controlled disarmament;
- (b) *Collective Defence* as embodied in the North Atlantic Treaty;
- (c) *Partnership with the United States* in the defence of North America;
- (d) *National Measures* to discharge responsibility for the security and protection of Canada.

Limitations on Canadian Commitments

Any nation must be concerned that its obligations do not outrun its capabilities. A middle power such as Canada must be particularly careful to ration its commitments. Although at the end of the war Canada could have developed the capability to manufacture nuclear weapons, it elected, as a matter of deliberate choice, not to become a nuclear power.

Also, Canada did not become a party to the inter-American defence system. And, at the conclusion of the Korean war, Canada withdrew her troops from that area. Subsequently, Canada did not assume regional defence obligations in the Pacific, such as participation in SEATO. In consequence, limits have been set to our military responsibilities.

The Post-War Re-organization

Before 1939, the Army was the principal service, with the R.C.N. and R.C.A.F. maintaining smaller regular forces. The main role of the Army was to train and administer the non-permanent Militia. Mobilization plans were ambitious but mobilization reserves and equipment were negligible. Nevertheless, on the basis of this rudimentary system, Canada was able, after a lengthy period of mobilization, to play an important part in World War II, as she had in World War I.

In the post-war re-organization, which took place during the years 1945-47, it was recognized that Canada could not return to its pre-war attitude to defence. Canada was then relatively strong and prosperous at a time of Soviet expansion and Western European weakness. In addition, Canada had undertaken new responsibilities through its membership in the United Nations.

Another major lesson of the war was the inadequacy of the pre-war mobilization base. After September 1939 considerable time elapsed before Canada was in a position to take a significant share in military operations. It was recognized that in any future war, such time, in all probability, would not be available. Nevertheless, the basic concept underlying the post-war re-organization was traditional: a mobilization base and a mobilization period. The primary aims of the post-war re-organization were to improve the mobilization base and to reduce the mobilization period.

Post-War Innovations

The post-war re-organization included, however, a number of important innovations. The R.C.N. and the R.C.A.F. achieved real, rather than nominal, equality with the Army. This development reflected lessons of the Second World War and, in particular, the importance of both air and sea power. There was a general belief that in any future war Canada's principal contribution might best be made in the air or at sea. It was argued that as a nation possessing a relatively small population but an advanced technology, with an historic objection to conscription and separated by an ocean from any probable theatre of war, Canada was well placed to supply air and naval forces but at a disadvantage in supplying large land forces.

A second significant innovation was that, in all three services, small operational components were established. This was to provide a basis for a potential military contribution to the United Nations; to enable Canada to participate in partnership with the United States in the defence of

North America; to further the training of Regular Forces; and as an immediately available asset on mobilization.

In comparison with the pre-war situation, the post-war defence budget and the regular establishment were increased approximately tenfold, although primary reliance continued to be placed on mobilization. In the immediate post-war period this was a practical policy. Large reserves of equipment were retained from the Second World War, especially in the case of the Army. Probably even more important was the existence of large reserves of trained manpower.

Service mobilization plans provided for major capabilities. These included a 100,000-man Navy capable of playing an important role in the defence of North Atlantic sea communications; a field Army of six divisions, including all supporting arms and services; and a balanced Air Force. However, these plans were flexible in the sense that they provided a range of options from which, in the event of a war of some duration, the government of the day would have been able to choose.

A third important innovation was the establishment of the Joint Staff and the development of machinery for some degree of joint planning and intelligence. There was also the establishment of the National Defence College and the Service staff colleges and, eventually, participation in NATO and NORAD Commands which provided Canadian officers with wider experience in national and international staff functions. As a result, Canada was in a better position to share responsibility in the planning and direction of major military programs.

Another important change was the growth of a capability for research and development. This reflected one of the major lessons of the Second World War: that science and technology had become prime military assets equal in importance to industrial capacity and manpower. It was not expected that Canada could develop and produce the entire range of equipment required by the Canadian Armed Services. However, it was considered possible to form a technological alliance with the larger allied powers. A modest Canadian contribution in the field of research, and in appropriate cases, development, constituted Canada's membership fee.

In the immediate post-war period it was feasible to conceive of Canadian defence primarily in terms of mobilization potential. This had the very great advantage of economy in resources. It also tended to preserve flexibility. The effect of the post-war re-organization was to provide Canada with the basic elements of a modern defence establishment. It furnished the basis for the Korean War expansion which took place rapidly, and, on the whole, efficiently.

The Post-Korean Expansion

It is now clear that decisions taken during the period 1950-53 brought about a major alteration in Canada's defence policies. The most conspicuous feature of this period was that regular manpower was increased about two-and-a-half times, while the defence budget increased almost fivefold. These developments took place under the pressures generated by four major events: the first Soviet nuclear test of September 1949 and the consequent Soviet nuclear threat to North America; membership in the North Atlantic Treaty in 1949; the development of a system of

collective defence under NATO; and the invasion of South Korea in June 1950.

Canada accepted specific and quite sizable operational commitments in Korea; for the defence of Northwest Europe and the western Atlantic; and for the air defence of North America. These obligations involved forces-in-being, rather than mobilization potential; in strategic terms, the equivalent of a transference from credit to cash. Canada also instituted, as part of defence policy, substantial Mutual Aid and air training programs to assist its Western European partners.

From a military point of view, the principal result was to introduce the new principle of specialization of missions. With comparatively minor exceptions, Canada's defence programs now were specific in nature and made sense only in relation to the total capabilities of the entire group of NATO nations and to the Alliance objective of creating balanced collective forces.

Evolution, 1954-63

Following the withdrawal of Canadian forces from Korea in 1954, there were no major changes in Canada's defence programs or commitments until 1959, when the decision was taken to convert the R.C.A.F. Air Division in Europe from the air defence role to the strike and reconnaissance roles, and to re-equip it with the CF-104.

In 1959 the Department of National Defence, particularly the Army, was also assigned a role in national survival. By this time no serious attempt was being made to maintain a mobilization base. The policy was adopted of equipping to war scales only the brigade group in Germany. Troops in Canada were in future to be equipped only to training scales.

SECTION III

CONSIDERATIONS AFFECTING FUTURE POLICY

International Outlook

Despite the evident hazards of prediction, some attempt to estimate the future evolution of world power relationships is an essential prerequisite of defence planning. Major equipment programs initiated in the near future will have to meet the requirements throughout the 70's and into the 80's. Defence-associated activities, such as research and development, will have an effect over an even longer period.

Military technology must be expected to go on changing rapidly. As long as the U.S.A. and the Soviet Union both possess the ability to inflict unacceptable damage on the other, regardless of quantitative disparities in striking power, calculated all-out thermonuclear war would be irrational and is, therefore, improbable. However, in the absence of a settlement of major East-West political problems, the maintenance by the West of the capacity to deter such thermonuclear war will remain an essential military and political necessity, with the main responsibility resting on the strategic resources of the U.S.A.

It is probable that Communist China will grow in power, and unless its national objectives change, it may also grow in menace. The production of some nuclear weapons by Communist China during the next decade cannot be discounted, but it is not likely to acquire an effective nuclear arsenal, with means of delivery, which could compare with that of the U.S.A. or the U.S.S.R. during this period.

In the same time period, failing the adoption of a self-denying ordinance by international accord, a number of additional countries may be tempted to develop an independent nuclear capability. Failure to achieve a solution to this problem, while it is still of manageable proportions, could fundamentally and dangerously alter the world security situation and render invalid many current defence assumptions.

Assumptions concerning the probable political developments over the next decade or so cannot be made with any certainty. Within the Communist world, the present trend away from a monolithic structure towards increasing diversity and individuality seems likely to continue, accompanied by a relaxation of some of the rigidities of totalitarianism and the possible adoption of less militant external policies on the part of the more affluent European Communist states. Similarly, within the Western Alliance, the resurgence of the economic strength and political influence of Europe will require some adjustment of the relationships which have characterized the post-war period.

The possession of effective deterrent forces, including nuclear weapons, by both major military groupings will probably continue to discourage military adventures and to encourage the continued search for means of reducing the possibility of war by accident, miscalculation or surprise attack. On the main East-West issues, increasing importance will probably be attached to the quest for security through negotiations of the type now

being undertaken by the 18-Nation Disarmament Committee in Geneva and in bilateral discussions between the two dominant powers.

However, the Communist countries can be expected to continue to promote expansionist aims by measures short of all-out war. Tensions will persist. In the North Atlantic area there will, therefore, remain a corresponding need to maintain intact the military and political cohesion of NATO. Elsewhere in the world, Communist pressure, including the active fomenting and support of so-called "wars of liberation" in less-developed areas, may well continue and intensify. In such areas, instability will probably continue in the decade ahead and call for containment measures which do not lend themselves to Great Power or Alliance action. The peacekeeping responsibilities devolving upon the United Nations can be expected to grow correspondingly.

This does not mean that the Canadian government considers a genuine relaxation in international affairs impossible. On the contrary, the prospects of a détente in relations between the free world and the Soviet Union exist and must be encouraged in every possible way. Certainly the signing of a limited nuclear test ban agreement was a forward step in co-operation and better understanding between East and West.

There are also trends within the U.S.S.R. and other East European countries which give different and potentially more lasting motives for détente and accommodation with the non-Communist world. Most important among these are the rising expectations and demands for a better and freer life. Related to this is the profound intellectual ferment in Communist society and the desire for more open and normal relations with the West. Problems of allocating limited resources, the crisis in Communist agriculture, and in some ways the Sino-Soviet quarrel, also support the desirability from the Soviet point of view of détente with the West.

It would, however, be naive not to recognize that many Communist leaders frankly regard the policy of détente as essentially tactical and designed to buy time.

Whether the more relaxed atmosphere will prove lasting, and can be developed into a reliable basis for mutual accommodation and peace, therefore remains to be seen. Undue pessimism would be as unfounded as facile optimism. The evolution inside the Communist world will depend in part on Western policies, and our willingness to meet half-way any genuine proposals towards accommodation.

In circumstances both of cold war and of potential détente, foreign policy and diplomatic negotiation are of great importance, being vital instruments in encouraging such opportunities as may exist for accommodation and relaxation. But it is essential that a nation's diplomacy be backed up by adequate and flexible military forces to permit participation in collective security and peacekeeping, and to be ready for crises should they arise.

The Range of Conflict

The range of potential conflict extends from the possibility of all-out thermonuclear war, through large-scale limited war, to insurrection, guerrilla activity and political upheaval. Of these, in the scale of probability, nuclear and major non-nuclear war are the least likely provided the balance of deterrence is maintained.

As the spectrum of conflict varies, so does the method of counter-action. At the high end of the scale—the deterrence of nuclear and major non-nuclear war—the method of proven record is the association of free nations in the North Atlantic Treaty Organization. In respect of lesser conflict, the United Nations has shown itself to be a valuable stabilizing and peacekeeping influence. National forces also have been used in some circumstances.

Canada and the Deterrence to Major War

The contribution Canada can make to the deterrence of war is limited by the size of our human and material resources. Nevertheless, what we can contribute is far from negligible. We have an obligation to make that contribution.

NATO Strategy

Strategic policies are—or ought to be—the basis of plans, military programs, major procurement decisions and the establishment of priorities for research and development. The period 1945-63 has been characterized by rapid changes in strategic concepts owing mainly to revolutionary developments in military technology and in political circumstances. This has led to the obsolescence of strategic concepts and of military equipment. Difficult adjustments have been called for on the part of all nations. It is not in Canada alone that there are differences of opinion in regard to strategy. In the Alliance as a whole there is a wide range of views.

The major difference of view is between those who advocate immediate reliance on nuclear weapons, either strategic or tactical, and those who support a strategy of options—of graduated defence. But this difference is considerably narrowed when both views are thoroughly examined. Those who support the former view cannot really expect that the response to a single rifleman or even a company of riflemen should be a world-shattering holocaust. Similarly, those who propose a strategy of options do not contemplate the sacrificing of large areas of territory before any nuclear weapons are employed for defence.

Graduated or flexible response is a reaction against the doctrine of massive retaliation. It is based upon the proposition that the Western Alliance should not be placed in a position of excessive reliance upon nuclear weapons or, more generally, of being compelled to employ force in a manner incompatible with Western aims and objectives. The principle of flexible response places increased emphasis upon the provision of conventional forces. It involves reduced dependence upon strategic and tactical nuclear weapons although it does not reduce the requirement for these capabilities.

In the belief that adequate force through a wide spectrum is essential to the deterrence of war, it is the policy of the government, in determining Canada's force structure for the balance of the decade, to build in maximum flexibility. This will permit the disposition of the majority of our forces in Canada where they will be available for deployment in a variety of peacekeeping activities.

Nuclear and Non-Nuclear

The question of nuclear weapons involves three distinct issues: joining the so-called "nuclear club"; Canada's political responsibility as a member of a nuclear-armed alliance; and the availability of nuclear weapons to Canadian armed forces.

The first of these issues is essentially fictitious. There has never been any serious question of Canada becoming a member of the nuclear club—i.e., one of those nations which by its own national decision can launch nuclear weapons. This ability could be attained only by the national manufacture of nuclear weapons. It is not contemplated.

The question of nuclear weapons for the Canadian armed forces is subordinate to that of Canada's political responsibility as a member of a nuclear-armed alliance. NATO is a nuclear-armed defensive alliance, which dare not be otherwise as long as it is confronted by a nuclear-armed potential opponent. NATO may become less dependent upon nuclear weapons, but the alliance must continue to possess nuclear weapons in the absence of controlled disarmament and as long as hostile forces have them. Its policies must envisage that in certain circumstances such weapons would be used against aggression. A share in the responsibility for these policies is a necessary concomitant of Canada's membership in NATO. One cannot be a member of a military alliance and at the same time avoid some share of responsibility for its strategic policies.

Having accepted the responsibility for membership in a nuclear-armed alliance, the question of nuclear weapons for the Canadian armed forces is a subordinate issue. It depends on how we can most effectively contribute to collective strength.

Defence of Canada

It is, for the foreseeable future, impossible to conceive of any significant external threat to Canada which is not also a threat to North America as a whole. It is equally inconceivable that, in resisting clear and unequivocal aggression against Canadian territory, Canada could not rely on the active support of the United States. Recognition of these facts, however, must not be permitted to obscure certain national responsibilities of which account must be taken in Canadian policy.

Canadian defence is part of the defence of North America but it is, in certain key respects, a clearly distinguishable part of the larger strategic task. One can define the defence of Canada as those aspects of North American defence which must, for reasons based upon Canadian national interests, be subject to Canadian control. The minimum requirements for the defence of Canada are: the ability to maintain surveillance of Canadian territory, airspace and territorial waters; the ability to deal with military incidents on Canadian territory; the ability to deal with incidents in the ocean areas off the Canadian coasts; and the ability to contribute, within the limit of our resources, to the defence of Canadian airspace.

There are, in addition, certain national tasks of a military or quasi-military nature for which the Department of National Defence has some responsibility. These include: survival operations; search and rescue; communications; and aid to the civil power.

North American Defence

The major threat to North America at this time is from the air, and it is in the field of continental air defence that co-operation with the United States has assumed the largest proportions.

The future of continental air defence, therefore, is obviously of great concern to Canada, both because of the sizable resources devoted to it, and because of the question of nuclear warheads. While a downward trend in continental air defence forces seems likely, yet, short of total disarmament, one cannot foresee the day when Canada will not be directly involved in some form of air defence operations.

Such defence, to be fully effective, involves nuclear weapons. It should be noted that these weapons could be used only in the event of a deep enemy penetration of Canadian air space.

The future of North American air defence involves a number of questions which will be of continuing concern to Canada, including the maintenance of radar and active defence components commensurate with agreed estimates of the bomber threat; possible replacement of radars and active defence systems owing to obsolescence; measures to increase the survivability of the air defence system under nuclear attack; and the implications for Canada of the possible introduction of a defence against intercontinental ballistic missiles.

Of these, the most significant is the anti-ICBM, on which the United States has devoted a considerable effort in research, with consequent heavy expenditures. While some progress has been made, it has not yet been decided to deploy such a system and any such deployment could not be expected for some time. A decision to install an AICBM system would have a profound effect on North American defence. Directly related to this decision will be the level of active air defence; the degree of passive defence and fall-out protection required; and the relevancy of a defence against missile-launching submarines. So far as this present paper is concerned, the point is that there are no major questions of policy in this area which are ready for resolution at this time.

It seems probable, however, that, failing the wide-scale deployment of AICBM, the proportion of Canada's resources directed to air defence will gradually decline through the balance of the decade.

Maritime Forces

Since 1939, Canadian maritime programs have been heavily concentrated upon the defence of North Atlantic sea communications against submarine attack. This concentration has been based on the importance of these communications to the entire North Atlantic Community. It has had the effect of establishing a strong Canadian presence in the approaches to the Gulf of St. Lawrence and in the waters off the Atlantic coast. At the same time an adequate anti-submarine warfare capability is being maintained on the Pacific coast.

While the relevancy of developing a capability against missile-launching submarines will be determined largely by the deployment or non-deployment of anti-ballistic missile systems, there is no doubt that maritime forces will continue to have an important role in conjunction with the strategy of flexible response.

In anti-submarine warfare, improvements in detection techniques give promise of more effective systems against both conventional and nuclear-powered submarines. There is also promise of weapons systems to make submarines increasingly vulnerable to attack. Formidable problems remain in this field, however, requiring continued emphasis on research and development.

In order to get the maximum effectiveness for our investment in the anti-submarine force, we are conducting a major study to determine the best combination of weapons systems for this task. We have the active co-operation of our allies in this research.

Peace-Keeping

Since the war Canada's armed forces have been increasingly engaged in peace-keeping operations mostly under the auspices of the United Nations but also under other international arrangements, as in Indo-China. These operations have varied in size and scope. One broad category has involved the use of mixed military observer teams such as those employed in Kashmir, Palestine, Lebanon and Yemen. Another has called for the deployment of substantial national contingents under United Nations command, such as those in Korea, the United Nations Emergency Force in Sinai, the United Nations operation in the Congo and, more recently, the United Nations Force in Cyprus. Canadian military personnel have participated in virtually all of the operations conducted by the United Nations.

The development of this United Nations peace-keeping role has been pragmatic, depending largely on specific conditions and prevailing political circumstances. Rarely have these been duplicated exactly. The failure of the Great Powers to agree on the enforcement measures provided for in the Charter has led to improvisations as the practical demands for United Nations assistance arose. This situation, combined with the resistance of some other member states, has rendered impracticable for the time being the establishment of a standing United Nations force. In addition, experience has taught the need for flexibility in the organization, composition and mandate of United Nations military forces.

Canada's own experience in this field points to the need for a high degree of versatility in preparing for possible United Nations service. In the past, requests from the Secretary-General for assistance have been for specialists of various kinds, mainly from the Canadian Army and the R.C.A.F. The fact that Canada is one of a small number of powers capable of and eligible for United Nations service, with a highly trained and diversified military establishment, qualifies it for varied roles in United Nations operations.

The success of United Nations peace-keeping operations may depend on the speed with which they can be established on the ground. Once there, they may be required to exercise authority with limited personnel in broad areas. Thus, there is a need for mobility as regards deployment, method of operation and logistic support. In most situations which can be foreseen, there is likely to be a need for highly mobile forces for ground observation, air surveillance, rapid transportation and reliable communications. These are among the United Nations requirements which Canadian forces have helped to meet in the past.

Preparations for United Nations service on the part of Canadian military personnel must be varied, with an emphasis on mobility. While the training and equipment of such forces may be of a special nature, the best results can be accomplished through the establishment of regular military formations, which need not be earmarked exclusively for United Nations service and which can be used for other roles as required.

SECTION IV

THE ORGANIZATION OF THE DEFENCE FORCES

Background

As in other Western countries, the defence forces of Canada have followed the historical division into three separate services, reflecting the traditional distinction drawn between the sea battle, the land battle, and, in more modern times, the strategy of air power.

Doubts, however, have been raised in all countries in recent years about the traditional pattern of organization by individual services. Combined operations have become commonplace, and the services have found a growing area of overlap in the tasks with which they are charged. As the Royal Commission on Government Organization noted in its report on the Department of National Defence, "Operationally, the anti-submarine forces of the R.C.A.F. bear a much more distant relationship to the Air Division in Europe or the Air Defence forces in NORAD than to the anti-submarine forces of the R.C.N.; both elements operate in the North Atlantic under the command of SACLANT."

The Royal Commissioners also pointed to the rapid development of defence technology as further diminishing any value or significance of the individual services as independent entities.

"Not only is the relative size of the 'administrative tail' growing steadily in all military forces—for budgeting, accounting, supply, construction and general administration; in addition, among the operational elements themselves there is a rapid increase in the technical content of the work, a large element being common to all three Services. Consequently, there is a growing range of activities of common concern to the Services, for which the traditional basis of organization is unsuited. It is increasingly recognized that to maintain three separate organizations for such functions is uneconomic. Moreover, the chronic scarcity of many of the skills involved cannot be ignored.

"The traditional pattern also aggravates the rigidities in the defence establishment resulting from collective arrangements. It has meant, for example, that in finding signallers for the Congo at short notice, the Canadian Army could look only to its own resources in the Royal Canadian Corps of Signals, having no access to the large reservoir of communications personnel in the other two Services."

Co-ordination by Committee

Such unity as the Canadian forces have been able to achieve has depended first and foremost on the unity of political direction which resulted from all three services being placed under the Minister of National Defence. Below the political level, however, efforts have been concentrated on achieving co-ordination rather than integration of the three services. The instrument through which co-ordination has been sought has been the Chiefs of Staff Committee.

This Committee, composed of the Chairman, the Chief of Staff of each of the three services and the Chairman of the Defence Research Board, has a collective responsibility for advising the Minister and government on matters of defence policy, for co-ordinating the efforts of the forces and for the direction of joint service organizations and operations. As was noted by the Royal Commission on Government Organization, however, the Chairman possesses no over-riding authority. Recommendations and decisions of the Committee must, in effect, be unanimous.

The report of the Commission continues—

“Thus the effectiveness of the Chiefs of Staff Committee as an executive authority is, to a large extent, dependent on the personal qualities of its members, each of whom has a virtual power of veto in its deliberations. The same pattern is followed throughout the co-ordinating organization that has evolved under the Committee—encompassing more than 200 standing tri-service committees. Although the business of the Chiefs of Staff Committee appears to be conducted with reasonable dispatch, your Commissioners observe that, in general, the system permits procrastination, and the absence of a single commanding voice may spell the difference between success or failure in any matter of joint concern to the three Services. Where an attempt is made to move beyond co-ordination to integration, the weakness of the committee basis of direction persists. When it was decided in 1953 to consolidate military medical services outside the direct authority of any one of the Chiefs of Staff, the Surgeon General was made responsible to the Personnel Members Committee comprising the Chief of Naval Personnel, the Adjutant General and the Air Member for Personnel. As an executive authority, this Committee has all the defects of the Chiefs of Staff Committee in aggravated form. Procrastination and inter-service disagreements, amounting to a virtual refusal to accept direction, have proved formidable obstacles to progress.

“A similar experience is noted by your Commissioners in the report on Telecommunications, involving the unsuccessful attempt of 1950 to develop an integrated teletype relay system under tri-service committee direction; the lack of an effective executive authority in that case led to the abandonment of the attempt at consolidation and the development of three wasteful and increasingly inadequate networks.

“It is the opinion of your Commissioners that effective consolidation cannot be based on joint control by the three Services with the object of preserving the traditional responsibility of the three Chiefs of Staff for the control and administration of all the Armed Forces.”

Integrated Forces

Having stated the problem, the Royal Commission recommended the gradual transfer of executive control of common requirements to the Chairman, Chiefs of Staff. In the opinion of the government this solution does not adequately resolve the basic issues. If a single command structure is not established, co-ordination by the committee system will remain with all of its inevitable delays and frustrations.

The fundamental considerations are operational control and effectiveness, the streamlining of procedures and, in particular, the decision-making process, and the reduction of overhead. To the extent that operational control is exercised by Canada, it is the view of the government that it can be most effectively exercised by a single command.

The question of duplication and unnecessary overhead, too, cannot be ignored. The present headquarters organization of the Department of National Defence is far too large. The fact that our field forces are modest creates a serious imbalance between the field and headquarters branches of the service. As it appears that we will have to maintain modest forces in being for many years to come, it is apparent that a re-organization is required.

Following the most careful and thoughtful consideration, the government has decided that there is only one adequate solution. It is the integration of the Armed Forces of Canada under a single Chief of Defence Staff and a single Defence Staff. This will be the first step toward a single unified defence force for Canada. The integrated control of all aspects of planning and operations should not only produce a more effective and co-ordinated defence posture for Canada, but should also result in considerable savings. Thus, integration will result in a substantial reduction of manpower strengths in headquarters, training and related establishments, along with other operating and maintenance costs. The total savings to be effected as a result of such reductions will make available funds for capital equipment purchases, and eventually make possible more equitable distribution of the defence dollar between equipment and housekeeping costs. Sufficient savings should accrue from unification to permit a goal of 25 per cent of the budget to be devoted to capital equipment being realized in the years ahead.

Two objections are given as reasons why integration should not be undertaken. First, that morale or "esprit de corps" is weakened, and second, that competition is diminished. Neither of these objections will stand against careful scrutiny. "Esprit de corps" by nature is associated with ship, or corps, or regiment, or squadron, as well as with the service. There is no thought of eliminating worthwhile traditions and there is no reason why morale should not be high—a direct result of effectiveness. Similarly, there will be no lack of competition. The sailors will press for more ships, the soldiers for more tanks and the airmen for more planes. This is as natural as breathing. Competition will not be lost but it will be contained at the service level.

The Organizational Method

No attempt will be made to set up a theoretical establishment to replace the existing one, nor will the details be prescribed in advance. Inevitable changes will take place under the direction of the men charged with responsibility in their various fields. Streamlined procedures will be worked out in practice. Standard policies will be based on the best available to meet functional requirements. It will be the responsibility of the Defence Staff to work out the problems but they will have the authority to do so in accordance with the chain of command unhampered by committees.

The success of the Minister in maintaining an effective civilian control raises—in the words of the Royal Commission on Government Organization —“a need for a strong staff group which is essentially civilian in character, outside the framework of the Armed Forces”. The government accepts and will implement the recommendation of the Commission “that the Deputy Minister be given greater responsibility for keeping under review the organization and administrative methods of the Canadian defence establishment, and assisting the Minister in the discharge of his responsibility for the control and management of the Armed Forces.”

Defence Programming

It is intended to introduce into the Department of National Defence a management system for planning and controlling major Defence programs at the departmental level. This system will display various components of the long-term Defence program in suitable detail over a significant time period. The system will provide a means of expressing various force structures, weapons systems, logistic arrangements and other military activities in terms of their immediate and long-term costs.

The main objectives of the system are:

- (a) to assist top management in the department in decision making by providing the means of analyzing and assessing various military programs and activities in terms which will relate military effectiveness to financial costs, manpower requirements, equipment needs, etc.
- (b) to provide the type of data which will enable the effects of defence decisions to be clearly expressed in terms of forces, manpower, equipment, and money both in the short term and over a period of years.

For this purpose, the total Canadian defence structure will be grouped into a number of major programs. These programs will cover all arms of the services and will be expressed in terms of major military missions or objectives. Each program will be analyzed in appropriate detail to reflect the military and civilian manpower, the major equipments and the anticipated costs that are programmed over a period of years for the various elements of the Program. Projections of each program will be reviewed annually.

This system will enable Defence Programs to be examined and considered in relation to their overall military effectiveness from the standpoint of achieving a particular mission. It is hoped that the system will enable defence resources to be allocated to Defence Programs in the most effective manner from the point of view of ultimate military output and in accordance with a clear and detailed plan.

SECTION V

THE SHAPE OF CANADIAN FORCES 1964-1974

Section III of this paper discussed the considerations affecting future defence policy, and Section IV outlined the integrated organization which contemporary defence tasks require. The question now to be resolved is the determination of the force structure which will best meet our defence needs in the face of the many uncertainties which the future holds.

Of necessity, the answer to this question is an evolutionary process. It starts with our present capabilities. These will be changed gradually in conformity to a relatively long term plan of action. To be effective, this plan, designed as a basis of development, must not be too rigid.

It is impossible to state in categorical terms exactly where and how our forces will be required and allocated in the decades ahead. However, our major defence contribution for some time will continue to be participation in collective defensive arrangements, mainly the North Atlantic Treaty Organization.

NATO Europe

Our present contribution to NATO in Europe is one Brigade Group stationed in Germany and one Air Division consisting of eight squadrons stationed in France and in Germany. Two brigades in Canada are intended primarily for deployment to the European theatre in the event of hostilities.

A possible course would be for Canada to withdraw from the commitment to maintain a Brigade Group on the central European front in favour of making a contribution to an air portable force based in Europe and available for employment on the NATO flanks. After the most careful consideration, it has been decided that this would not be in the best interest of Canada and the Alliance for several important reasons.

The brigade, consisting as it does of highly qualified and well trained professional soldiers, is making a useful contribution to NATO Europe at one of its most vulnerable points. Its presence, moreover, has a political significance for the Alliance, and its withdrawal from front-line positions at this time could be misinterpreted—by both our European allies and the Soviet bloc. The importance to the solidarity of the Alliance of a Canadian “presence” in the NATO defence forces is real. In consequence, it is the intention of the government to continue to employ the brigade in its present role.

It is also felt that the requirement for a mobile force can be better met by other means. Increased air transport will make it possible to move units to the European flanks, if and when required, from bases in Canada and the United States. This is more economical than stationing mobile reserves in Europe and more acceptable than withdrawing front-line battalions for mobile service on the European flanks.

A Mobile Force in Canada

It is in respect of the two brigades kept in reserve in Canada and earmarked primarily for the European theatre that a change is proposed.

These two brigades will be re-equipped and retrained as a mobile force as well as for rotational service with the NATO brigade. Although stationed in Canada, they will be available for use where and when required. In order to achieve maximum flexibility, these two brigades will be equipped to permit their effective deployment in circumstances ranging from service in the European theatre to United Nations peace-keeping operations.

In order to achieve a more effective use of available manpower, it is proposed to undertake a gradual conversion of the fourth brigade into a special service force. This force will be smaller than the conventional brigades and will be provided with air-portable and air-droppable equipment. It will be trained to perform a variety of military tasks.

A Mobile Force for NATO

The Supreme Allied Commander Europe has asked Canada to make available one battalion for use as part of his mobile force. This can be done without difficulty by simply drawing on one of the Canadian-based brigades and the air transport that will be available for its deployment. When employed in the mobile role, only light equipment is required for the battalion.

Air Forces

As already announced, we are readjusting our air division in order to have the existing eight squadrons in Europe deployed as follows: six squadrons in Germany in the strike role and two squadrons in France in the reconnaissance role.

All eight squadrons are also being equipped for a non-nuclear attack role. This non-nuclear capacity will be phased in as quickly as possible and will give our air division maximum flexibility under varied circumstances. As follow-on CF-104 aircraft will not be acquired, the numbers of operational squadrons of this type of aircraft will decline as a result of normal attrition over the next ten years.

During the decade, we propose to give increasing emphasis to the provision of aircraft for direct support of our ground forces. We anticipate that a high performance aircraft will be available to provide sufficient flexibility for any task we might undertake from ground attack to air surveillance. These versatile tactical aircraft will possess adequate radius of action to allow rapid deployment from Canada to bases overseas. This will permit squadrons to be stationed in Canada or Europe as required.

The plan calls for the squadrons stationed in Europe to be associated, ultimately, more directly with the army brigade group. It is recognized, however, that this kind of association on a national basis may not be practical without some adjustment in the present NATO military organization in Europe. Such an adjustment, if necessary, will be the subject of consultation with NATO. Squadrons in Canada would be available for training in close association with ground forces. Thus, ground and air forces would complement each other in a manner which has not been

possible in the past. Some of the squadrons stationed in Canada would also contribute to air defence as required, thereby eliminating the necessity of acquiring special aircraft for this purpose.

North American Air Defence

It is planned to continue to operate the three squadrons of CF-101's now assigned to NORAD during the life of the aircraft. Beyond this, units from the combat squadrons previously mentioned will be available if required. The two Bomarc squadrons will be operated as long as they form an integral and essential part of the NORAD system.

The radars and surveillance systems in the Canadian part of the NORAD network will be operated in accordance with the existing agreements. It is our hope, however, that there can be a gradual phasing-out as the relative threat from the manned bomber diminishes, and a gradual re-allocation of resources to other roles.

Air Transport

As the emphasis in our force structure is on greatly increased mobility, it will be necessary to substantially augment our existing air transport capability. It is proposed to consider the possibility of utilizing the resources of the civilian air carriers in circumstances involving the transport of large numbers of personnel to areas where first-class air strips are available.

In order to have the flexibility in circumstances where improved air strips are not available, and in order to carry large quantities of stores and equipment, a considerable augmentation of the "air truck" component of the air transport fleet is being undertaken. This fleet will be available for United Nations and other requirements. It has the capability of landing both troops and equipment on improved or semi-improved air strips. This versatility will contribute much to our ability to respond to varied demands.

NATO Maritime

It is planned to continue in the anti-submarine role. Canada has a large capital investment in this capacity and special skills and training as well. Current developments give promise of considerable effectiveness from a "mixed" force of modest size. Studies are continuing to determine, in so far as is possible, the most effective "mix" of weapons systems. Surface ships, submarines, helicopters and fixed wing aircraft, both carrier-based and shore-based, are all useful in anti-submarine warfare. The question is to determine as precisely as is possible the proportion of weapons systems which will provide the maximum intensity of surveillance and maximum defence potential for the least cost.

In this connection, careful study is being given to the possibility of building two or three nuclear-powered submarines, which are powerful anti-submarine weapons. This is, however, a large issue and it cannot be decided immediately. In any event, the requirement for naval forces will continue to be related mainly to our alliance contributions. To this end, a modern and well-equipped fleet of appropriate size is to be maintained.

Canada and UN Requirements

Under the plans set out above, sizable land, air and naval forces will normally be deployed in and around Canadian territory. Additional requirements are limited fairly well to special tasks and United Nations peace-keeping operations. As indicated earlier, Canadian forces will be trained and equipped in a way which will permit immediate and effective response to United Nations requirements.

This training will include a wide variety of specialized capabilities to permit units to operate in extreme conditions from arctic to jungle, and to undertake tasks of varied complexity from firefighting to communications. The key to organization will be flexibility and mobility. The existence of adequate transport will make it possible to quickly lift units or a brigade to any trouble spot where their presence might be valuable to maintain peace or assist in the limitation of local outbreak.

In considering the areas of possible deployment in support of United Nations activities, the question of a requirement for sea-lift has been considered. Conditions may arise which will necessitate carrying heavy equipment and supplies by sea. To increase our capability, a modest additional sea-lift will be acquired either in conjunction with the anti-submarine force or independently. The combined land, sea and air forces normally stationed in Canada and at Canadian ports will be sufficiently flexible to satisfy almost any conceivable requirement for UN or other operations.

Priorities

The choice of priorities outlined above is based on the following assessment:

1. Forces for the direct protection of Canada which can be deployed as required.
2. Forces-in-being as part of the deterrent in the European theatre.
3. Maritime forces-in-being as a contribution to the deterrent.
4. Forces-in-being for UN peace-keeping operations which would be included also in (1) above.
5. Reserve forces and mobilization potential.

On the basis of this assessment, major expenditures in the next few years will be designed to:

- (a) re-equip the Army as a mobile force;
- (b) provide an adequate air and sea lift for its immediate deployment in an emergency;
- (c) acquire tactical aircraft;
- (d) maintain a relatively constant improvement of maritime anti-submarine capability.

Armed Forces Reserves

To assist in the primary task of re-organizing the current forces a Ministerial Commission has been set up under the chairmanship of Brigadier E. R. Suttie. It was considered advisable in order to obtain

a valid perspective of both national and informed military opinion to take advantage of the judgment of a group of experienced men. The Commission has been given the task of recommending to the Minister the best means of fulfilling the militia requirements of Canadian defence policy and the changes which should be made in organization to permit the militia to carry out its revised roles more efficiently and realistically.

The primary role of the militia is to support the Regular Army. The Emergency Defence Plan calls for the withdrawal of Regular Army personnel from the Defence of Canada Forces in static installations to bring the field force up to establishment. The militia would be required to form the framework for logistics and special units which are not provided in peace time. Secondary roles include the provision of a training force which would be required in an emergency to support the field forces; internal security including the provision of trained officers and men for guarding key points; and assisting the Regular Army in its national survival responsibilities. The Ministerial Commission will advise in respect of the best organization to fulfill these roles.

Ministerial Committees have considered the question of Naval and Air Force Reserves. Naval Reserves are specifically required to release men from shore establishments in order to bring ship complements up to war time establishment in an emergency, while the Air Force Reserves have a role in support of ground forces in civil survival. The reports of these two Committees have been referred to the Suttie Commission. It will be an objective of the Commission to recommend the maximum possible degree of integration of facilities, having in mind the specific nature of the roles and to take into consideration, in the re-organization of the Reserve forces, the integration set out in Section IV.

Civil Defence

In 1959, certain specific national survival responsibilities were assigned to the Minister of National Defence and, in turn, the Canadian Army was designated the principal Service to carry out these responsibilities. At the same time, the Emergency Measures Organization was given the overall responsibility for co-ordination at Federal, Provincial and Municipal levels. This Organization came under the jurisdiction of the Prime Minister, but in 1963 responsibility was transferred to the Minister of Defence Production.

The Canadian Army, following a study of the problems involved, has taken the following steps: a National Survival Attack Warning System was established; a Nuclear Detonation and Fallout Reporting System was designed; elements of the Army component at Federal and Provincial levels were trained to carry out damage and casualty assessment; the Army with the Emergency Measures Organization and other Federal, Provincial and Municipal agencies, developed joint plans for re-entry operations and both Regular Army and Militia Forces are being trained to carry out assigned functions in this regard; and emergency communications for continuity of government have been provided.

As has been indicated, the future priority to be assigned to civil defence measures will be influenced greatly by the decision to deploy or not

to deploy an anti-ICBM system. Until this major decision has been taken it is not possible to resolve a large number of lesser policy matters in the civil defence field. In the meantime, approved projects will be completed and maintained.

Mutual Aid and Military Training Assistance

The assistance which has been given to our European Allies under the Canadian Mutual Aid Program has, in the past, been a major element of Canada's contribution to the North Atlantic Treaty Organization. The Mutual Aid Program has comprised aircrew training, transfers of equipment both from Service stocks and from new Canadian production, and Canada's contributions to the NATO Common Infrastructure Program and the budgets of the integrated NATO Military Headquarters. The total value of assistance given since the beginning of the program in 1950 will be \$1,796 Million by 31 March 1964.

In recent years, the size of the Canadian Mutual Aid Program has reduced. On the one hand, the reductions have reflected the economic progress and increasing prosperity of most of our NATO allies in Europe. On the other hand, they have resulted from the end of the original NATO Aircrew Training Program, the exhaustion of equipment available for transfer from Service stocks, and the impact of costly modern reequipment programs for the Canadian Services on our ability to provide useful quantities of equipment from new Canadian production.

The Mutual Aid Program for 1964-65 totals \$41.02 million. It includes the Canadian share of the costs, during the year, of the joint Canadian-United States program of production in Canada of F104G aircraft for the Canadian Mutual Aid and U.S. Mutual Defence Assistance programs, aircrew training of Norwegian and Danish aircrew, transfers of equipment from Service stocks mainly to support equipment previously transferred, and contributions to NATO Common Infrastructure Programs and NATO Military Budgets.

Contributions by Canada to the NATO Infrastructure Programs and NATO Military Budgets will be required as long as these joint NATO undertakings continue. Apart from this, no major new programs of Canadian Mutual Aid are foreseen. Canada will, however, be prepared to continue to consider reasonable requests for assistance in military training and possibly in the provision of equipment to NATO nations which require such assistance and where it can be given by Canada with advantage to the alliance as a whole.

Canada has extended military training assistance to a number of Commonwealth countries to help them in their efforts to create armed forces sufficient to maintain stability and national independence. Canada will continue to give careful consideration to modest requests of this nature from newly independent countries.

SECTION VI

DEFENCE RESEARCH AND INDUSTRY

Research and Science

In this scientific era the efficient planning and provision of defence forces demands a strong contribution from defence scientists and engineers. Application of scientific research and the scientific method can provide or improve upon solutions to a wide range of technical problems that beset the military establishment. Defence research also contributes to the progressive technological development of our industry which is so essential to the production of specialized equipment for the Armed Forces. In consequence, research has a direct influence on the national economy and, thus, on the well-being of our people.

Research normally does not require large financial commitments to achieve success and, hence, Canada can make very substantial contributions to the common pool of scientific knowledge available to our allies at a reasonable cost. From this investment there are two dividends: an improvement in the collective security, and a reciprocal flow of scientific information from the much larger endeavours of some other nations of the alliance. This return on our research investment is many times greater in scientific value than the cost of our own research efforts.

The agency in the Department of National Defence responsible for scientific research is the Defence Research Board created in 1947. Since its creation the Defence Research Board has made major contributions in many defence scientific fields. The most recent example has been the production of the "Alouette" satellite which is internationally regarded as at least as successful as any other scientific satellite yet launched.

The Board's extramural research activities are carried out mainly through grants-in-aid of research to universities and by means of contracts with industry. These investigations are usually basic in nature and are carried out by university groups who seek to provide new knowledge in fields from which important military developments are likely to arise in the future.

DRB provides support to industry through a fund established to promote and strengthen the research capability of Canada's defence industry. Additionally, the research resources of industry are supported and utilized through the award of contracts to firms to undertake research required by the Defence Department.

International collaboration by DRB in the field of defence science is wide and increasing. Canada participates with the U.S. and Britain in a very active tripartite organization built up to ensure the fullest utilization of the defence scientific knowledge, resources and facilities of these countries. In addition, bilateral agreements with several NATO nations serve to enhance the interchange of defence scientific and technical knowledge. The Board provides Canadian representation on a number of specialist committees through which NATO's scientific endeavours are progressed and co-ordinated.

Development

Development of military equipment within the Department of National Defence is the responsibility of the Armed Forces and represents specialized technological interests of the Services concerned. Actual development of such specific requirements, together with certain joint development projects under the auspices of standardization agreements with allied countries, is generally conducted in industry and is limited to items not available from other programs, domestic or allied. The result of conducting such development in industry is to improve industrial defence technology and thereby enhance the ability of Canadian firms to participate in co-operative development and production-sharing programs with allied countries.

With the co-operation of the Department of National Defence, the Department of Defence Production administers the Development-Sharing Assistance program in which military equipment and matériel is developed for potential use by the nation's allies. The projects are conducted entirely in industry and costs are shared between the Department of Defence Production, the industrial firm conducting the development and, in many cases, the military department of the allied country having an interest in the development.

For the future, a dynamic defence research and development program is an essential element of our defence policy. It is our intention not only to support it fully, but also to implement a gradual but consistent increase in the resources made available for such a program.

Industry and Production-sharing

During World War II and in the years following, Canada undertook the manufacture of a wide variety of defence equipment. This production served as a useful stimulant for Canadian industry and was beneficial in many ways to the economy as a whole.

However, since the end of the war, weapons and weapons systems have steadily become more complex and costs have mounted rapidly. Only the largest powers can economically design, develop and produce all their weapons. Therefore, there is a need for greater inter-allied co-operation to harmonize defence requirements and to co-ordinate production programs. Such co-operation was the establishment of the Canada-United States Defence Development and Production-Sharing Program.

Within the past two years efforts have been made to extend this collaboration in defence production beyond the United States to our NATO allies, and appropriate arrangements have been initiated with Britain, France and a number of other NATO countries.

It is considered that the hundreds of millions of dollars of foreign orders reaching Canada annually are evidence of progress made in co-operation with its allies in production for defence. It is in the context of these arrangements that it has been possible to justify the procurement of certain weapons developed and produced abroad.

In the broad spectrum of equipment required in an alliance there is ample room for participation by Canada in the development and manufacture of specialized equipment to meet the needs of its own forces and

of allies as well. One point is most important in this regard: when Canada does succeed in establishing a breakthrough, development must be pursued with despatch or the potential of the military and economic advantages may be dissipated.

Defence expenditures can make a contribution to the efficient development of manufacturing both for the domestic market and for export and, in so doing, contribute to the general growth of Canada. Programs to establish and improve production sources will continue. The closest co-operation between the armed services and the Department of Defence Production will be maintained in order to promote efficient purchasing practices and to see that Canadian products are used wherever that is feasible.

CONCLUSION

In this paper no attempt has been made to set down hard and fast rules for future policy and development. Flexibility, not rigidity, has been the keynote. The paper is a charter, a guide, not a detailed and final blueprint. The policy outlined in it is not immutable. It can be altered or adapted to meet the requirements of changing circumstances, national and international.

What those circumstances will be in the future no one can foretell. It is certain, however, that force is not the solution to the problems of peace and security in the world. Force alone, as all history shows, is not able to establish an enduring and creative peace.

Nevertheless, and regrettably, it is essential to maintain force on our side as a deterrent against attack from potential foes who are themselves heavily armed; as a means of removing the greatest temptation to an aggressor, the assurance of easy victory.

The maintenance of adequate force for the above purpose, gives us the time in which men of wisdom, persistence and goodwill can work together to build a world where peace will be secured by stronger means than force.

If we fail to take advantage of the opportunity that time gives us, then peace, and with it civilization, may be lost.

If we spare no effort in seeking for peaceful solutions to the problems that divide and embitter men, then true peace may be established and all mankind gain the victory.

In the realization of this objective, Canada, through diplomacy and defence, must continue to play a worthy part.

